19 October 1954

MEMORANDUM FOR: THE RECORD

SUBJECT: Project Monitor at [redacted] 50X1
and P-89, [redacted] 50X1

1. Time and Place of Meeting: The meetings were held on October 13th through 15th at the [redacted] 50X1

2. Attendance: [redacted] Associate Director, [redacted] 50X11
[redacted] 50X1
TSS/APD

3. Purposes of the Meetings: The meetings were held to

a. Discuss possible transmitter contruction for APD project with [redacted] 50X1

b. To investigate the current status of our work at [redacted] 50X1

4. Discussion:
MD-90

a. [redacted] 50X1
[redacted] and the undersigned 50X1
spent the day of 13 October in conference in order to determine what aid [redacted] might give to project MD-90. No priority for this project was initiated. If a transmitter were constructed which could be concealed in [redacted] using the [redacted] as an input, then the transmitter's output would be a frequency modulated signal. If [redacted] enters into this problem they would be responsible for the design of a concealable transmitter and an appropriate receiver. [redacted] would provide a [redacted] transducer which would provide the input signal for the transmitter. A decoder and reproducing typewriter at the receiving end would also be designed by [redacted] It would be possible for [redacted] to determine the feasibility of such things as they would be responsible for in one man month's time. A prototype might be constructed in five man months' time. [redacted] was asked to take no further action in a definite way on MD-90. It is assumed that having been acquainted with the problem as presented by [redacted], they will give it some thought and be prepared to discuss it further should another meeting be planned.

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b. P-89, Transistorized Sound-D-Tech Kit: The majority of the day of 14 October was spent on the transistorized sound-D-tech kit. The problem of coil procurement has been solved and the first production prototype of the AM-FM tuner is completed. The status of this project is essentially as stated in the August-September progress report. This day was spent discussing refinements in fabrication and reviewing the final specifications. [redacted] will deliver ten kits early in the week of 25 October. In the opinion of the undersigned, [redacted] has produced a very valuable piece of audio surveillance equipment which is in all ways superior to similar equipment presently used in the field. 50X1 50X1

c. Field Tests of Transmitters and 4.9 mc Oscillator:

(1) The day of 15 October was spent field testing 74 mc and 490 kc transmitters. Ranges up to 80 yards can be reliably obtained under free field conditions with the present 490 kc. It is generally agreed that a frequency between 1 and 5 mc would give better ranges for this [redacted] This is largely due to antenna requirements which exist in the [redacted] problem. 50X1 50X1

(2) A 4.9 mc cache oscillator which was tested this day measures 1 1/8" x 2 5/8" x 3 5/8" and has an external 2 5/8" x 3 5/8" loop antenna. A ferrite rod antenna was used on the receiver (National HRO) and it was determined that the oscillator could be detectable at a distance of 40 yards in an open field. It was intended that a WWV receiver should be used as a receiver for the oscillator. Unfortunately, the WWV receiver has been reworked so many times that it is finally become inoperative. It was suggested that a new receiver be built up from scratch rather than continue to use this WWV receiver. The fact that a National HRO receiver was used for these tests likely accounts for the good ranges which were observed above. Field tests will again be run subsequent to the construction of a new concealable and portable 4.9 mc receiver. When a one square foot loop antenna was used with the HRO receiver the oscillator could be detected from a distance of 112 yards.

d. The status of all other projects is essentially as described in the August-September progress report.

5. Actions:

a. TSS/APD

(1) Transmit results of pre-amplifier tests by NBS to [redacted] when such tests are completed. This will be done in the form of specifications compiled by the undersigned. 50X1